

Case Study

Berry & Escott



www.measurement-solutions.co.uk



Objective

Berry & Escott are a specialised engineering company that has been established for over 30 years and prides itself on delivering excellence in innovation, design, precision machining and 'turnkey' engineering solutions.

As a highly responsive and creative engineering company, they offer their customers unrivalled levels of customer service, technical expertise, and operational support. Continually investing and adopting leading-edge technologies across their design facilities and production processes, whilst offering comprehensive support across a range of skills.




Application

Berry & Escott have been using the MetraSCAN to enhance their accuracy of 'as built' customer equipment and reverse engineered components, while filling the gap between data acquisition and useable CAD data.

The data they can now obtain and process allows their designers to understand the deviations of manufactured components through evaluation and direct comparisons, and how this can impact the end results.

Meaning that designs and alterations can be completed early in the process by making informed decisions based on the data collected.



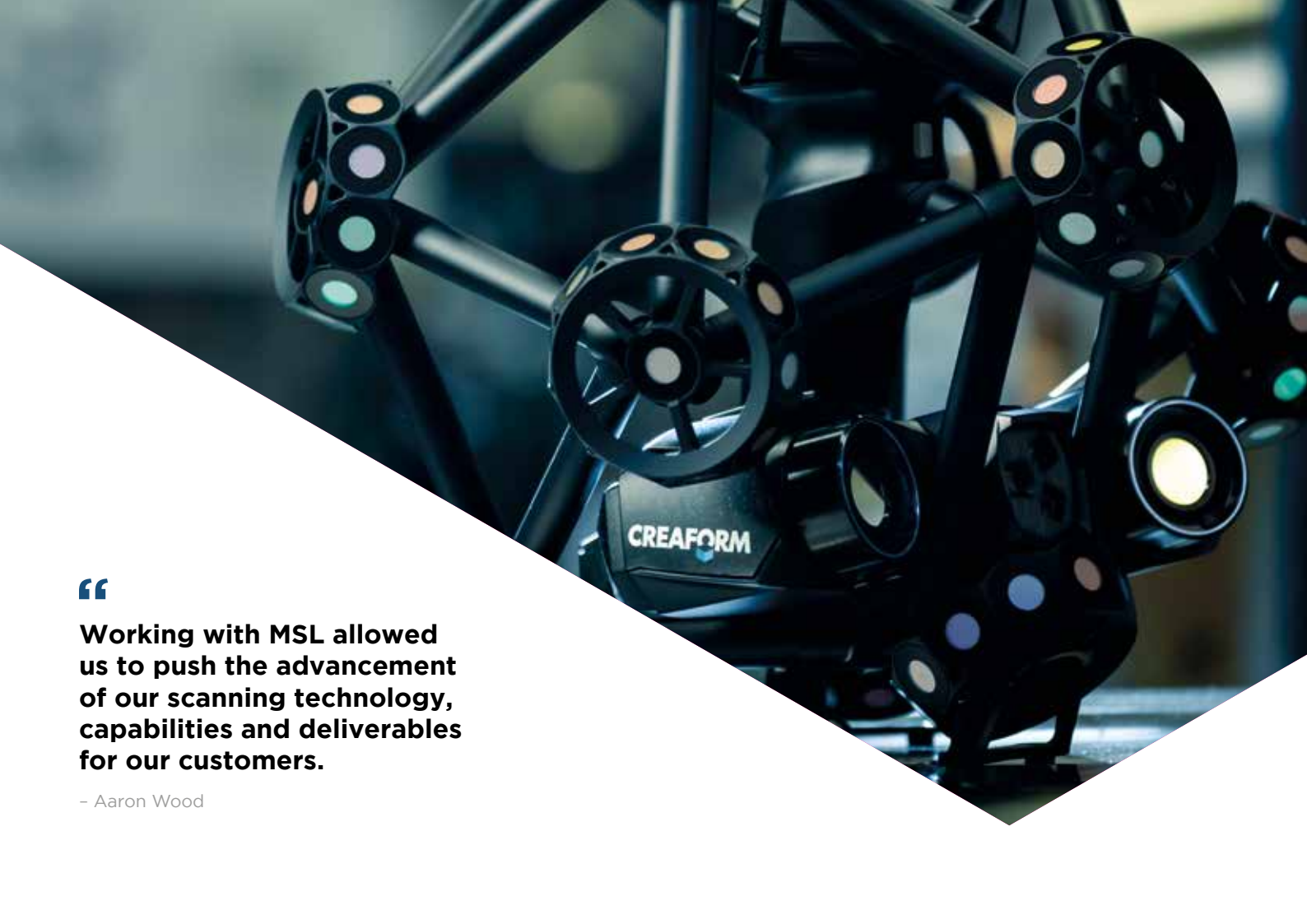


A common discrepancy Berry & Escott have identified in industry is between CAD design and as-built manufactured components, they are resolving the grey areas in-between the expectation to reality.

Challenge

Berry & Escott identified through their extensive use of point cloud data that the accuracy did not meet their or their customers' requirements, and difficulties arise from data sampling to produce a detailed accurate model that machined parts can be manufactured from.

As a precision engineering company, Berry & Escott require precise equipment to work fluently with their existing engineering design tools, collaboration between the scan data and CAD is vital in making the data useable.



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Working with MSL allowed us to push the advancement of our scanning technology, capabilities and deliverables for our customers.

- Aaron Wood



The solution

Combining the MetraSCAN black elite with the VXmodel software they can now produce full surface meshes of the equipment while maintaining high accuracy throughout.

The vital component to VX elements, the direct to CAD (Solidworks) feature, allows them to automatically extract the required planes, surfaces, and align the model.

This then allows them to produce machined components that seamlessly connect to the as-built equipment.

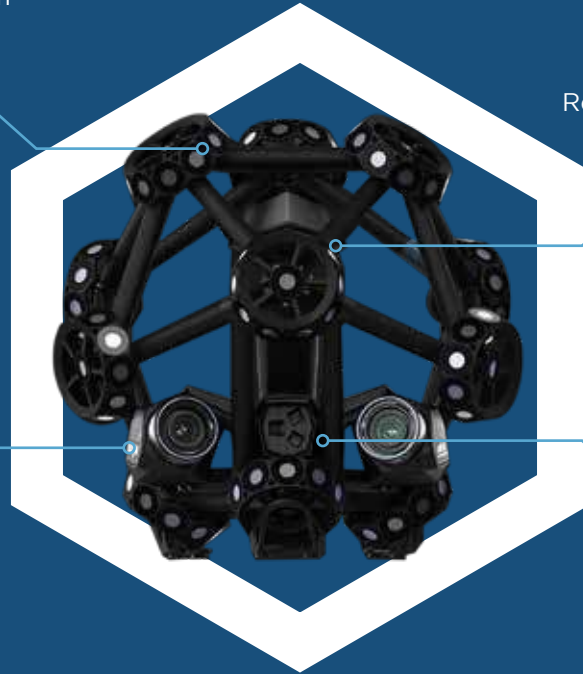
Through their research campaign they identified Creaform equipment and software as the only product on the market that could provide highly accurate, repeatable measurements that would allow them to reach their boundary conditions and provide seamless, usable scan to CAD data.



Discover more about VXmodel

Accurate From
0.025 To 0.04mm

Resolution Of 0.025mm



16.6m³ Volume

Auto Alignment



How it benefited the client

One project that Berry & Escott are engaged with is the Hinkley Point 'C' new nuclear project. On a nuclear project of this complexity and scale, maintaining quality is critical.

Their systems have enabled the evaluation of equipment and components prior to installation – allowing time for problems to be identified before they arise, whether it's clashes, deviations, or errors.

It then allows the installation teams to go on-site with increased readiness, eliminating costly downtime, keeping projects

on track to meet critical schedules and de-risking the work environment. Data gathered and processed from Creaform equipment and software allows them to push the boundaries of their industry and stay at the forefront of modern engineering.

They aim to transition as technology goes into augmented reality by overlaying captured data into the eyes of the customer while they are carrying out installations or inspections, giving them the real time information they require to complete works efficiently and effectively.





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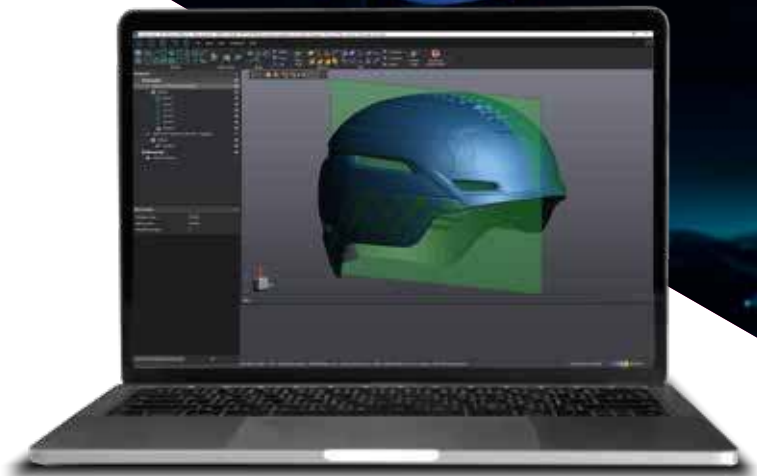
The final outcome

Berry & Escott have identified scanning as a key development in their industry, not only through the right first-time approach but also inspection and reverse engineering.

They will implement the equipment in as many processes as possible to optimise their existing methods and offer their knowledge and investment to their customers by means of a scanning service.

Results:

- » Highly accurate data sets.
- » Adaptable to any shape, or complexity of components.
- » Direct to mesh reducing process time, improving delivery times.
- » Scan to CAD increasing productivity and efficiency.
- » Smart feature extraction allows for reduced discrepancies and human error giving more reliability in the data.
- » Ability to generate reports, and full meshes to supply the customer.
- » Faster data collection reducing site time.





3D Scanning, Inspection, and Metrology

With over 23 years' experience, MSL brings a wealth of engineering experience to metrology, combining tools and software from leading manufacturers to create integrated systems for your workflows.

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